

SITUATION REPORT NO. 1
INCIDENT NO. 2005-036
DATE: March 30, 2005 Time: 4:30 p.m.

TO: Governor John Hoeven
State Capitol
Bismarck ND 58505

1. **NATURE OF DISASTER:** **Devils Lake Area Roads Acting as Dikes --**
Seepage is occurring within the roadbed of N.D. Highway 20 at three locations near Geske's Curve near St. Michael on the Spirit Lake Nation reservation. The highway, which is neither designed nor constructed to function as a dam, is one of six roads acting as dikes in the Devils Lake area. Tribal officials indicate that 30 homes would be threatened if a failure of the highway occurs.
2. **DEATHS AND INJURIES:** No deaths or injuries have been reported.
3. **DAMAGES:** As a result of seepage within the roadbed, the N.D. Department of Transportation (NDDOT) on Tuesday, March 29, closed N.D. Highway 20 in the area known as Geske's Curve, near its junctions with Bureau of Indian Affairs (BIA) Roads 2 and 4. Traffic is being rerouted to BIA Roads 4 and 9; the highway will be closed until further notice. Seepage is occurring at three locations along a one-mile stretch of highway on the westside of Geske's Curve. The difference in water level is 11.5 feet from one side of the road to the other. The continuing historic rise of Devils Lake, which began in 1993, has resulted in this section of Highway 20 being raised twice, in 1997 and 2000.

An analysis by NDDOT indicates several segments of roads crossing portions of Devils Lake are holding back water, although they are not designed to function as permanent dikes. They include N.D. Highways 20 and 57, and BIA Roads 1, 2, 4 and 5 on the Spirit Lake Nation reservation. The water differential measured at the various sites varied between 1.5 to 11.9 feet. Engineers indicated that the greater amount of differential on each side of the roadways, the greater possibility of seepage problems. N.D. Highway 57 has been raised three times since 1980; N.D. Highway 20 has been elevated two times at four different locations, and the BIA roads at least twice. NDDOT engineers identified potential road failure modes to include: sudden embankment failure; severe summer storm activity resulting in imminent overtopping; gradual increases in seepage rates; and sudden blowout of buried culverts/pervious layers.

The Long-Range Probabilistic Outlook, issued by the National Weather Service (NWS), indicates Devils Lake, which has no natural outlet, has a 65 percent chance of rising above 1,449.10 feet this year, the record level set on June 17, 2004. Previous record highs include 1,449.01 feet, which occurred on July 22, 2001, and again on August 9, 2001. The lake receives drainage from an area of approximately 3,810 miles and overflows into Stump Lake at an elevation of 1,446.5 feet.

On February 15, 2005, the Ramsey County Emergency Manager reported ice on Devils Lake was expanding and had caused damage to the Pederson Sub-Division lift station. The ice has opened on Mauvais Coulee near bridges along the coulee. Four permanent residences have been affected by the closure of the lift station.

4. RESOURCES:

LOCAL: Local agencies monitoring seepage activity include local/tribal emergency managers (Benson, Ramsey and Spirit Lake), local/tribal council chairpersons, city, county and tribal public works crews, local/tribal Law Enforcement, local dispatch centers and the Spirit Lake Casino and Lodge.

STATE: State agencies involved in monitoring and responding to the seepage activity include the Governor's Office, N.D. Division of Emergency Management (NDDEM), N.D. Department of Transportation (NDDOT), N.D. State Water Commission (SWC), N.D. Highway Patrol (NDHP), N.D. National Guard (NDNG), and the N.D. Indian Affairs Commission (NDIAC).

FEDERAL: Federal agencies monitoring conditions include the U.S. Army Corps of Engineers (USACE), Bureau of Indian Affairs (BIA), Bureau of Reclamation (BOR), National Weather Service (NWS) of the National Oceanic and Atmospheric Administration (NOAA) and the Federal Emergency Management Agency (FEMA) of the Department of Homeland Security (DHS).

5. VOLUNTEER ACTION: Members of the N.D. Voluntary Organizations Active in Disaster (VOAD) are monitoring conditions.

The N.D. Mental Health Association has offered assistance with information and referrals through its 211 service.

6. MAJOR ACTIONS: Governor John Hoeven has directed staffs from the NDDOT, N.D. Highway Patrol, State Water Commission (SWC), N.D. Indian Affairs Commission and the N.D. Division of Emergency Management (NDDEM) to assess the situation and implement correction action along N.D. Highway 20. The State Operations Center (SOC) has been activated and staffed by representatives of these agencies. Representatives of the NDDOT, SWC and NDDEM conducted on-site inspections of the seepage areas on Tuesday, March 29, and Wednesday, March 30. The Directors of NDDOT and NDDEM have been conducting periodic briefings with the representatives to identify concerns and determine corrective actions. Additionally, tribal and state officials have been

reviewing the Action Plan for Devils Lake Area Roads Acting as Dikes (RAAD), developed for Benson and Ramsey Counties and the Spirit Lake Nation, in cooperation with NDDOT and NDDEM.

Since Thursday, March 24, 2005, when seepage was detected, NDDOT officials have been monitoring conditions and have been conducting boring samples along N.D. Highway 20. The NDDOT and the SWC have been conferring on the results of the boring samples to determine corrective action. NDDOT officials are considering different options for implementation.

N.D. Highway Patrol troopers assisted the Bureau of Indian Affairs (BIA) with staffing barricades to ensure motorists were informed of the road closure and rerouted traffic. The NDDOT placed dynamic message boards at the site to advise motorists of the closure. The Highway Patrol is monitoring road conditions and traffic in the Devils Lake area.

The Spirit Lake Tribe Emergency Manager is working with local law enforcement and tribal community health conducting door-to-door notification of the residents of the seepage problems. The emergency manager has distributed information to residents regarding flood precautions. Room for 30 families has been secured at Spirit Lake Casino and Resort, if sheltering is required.

On March 23, 2005, USACE conducted a meeting to discuss future raises of the Devils Lake levee. Agencies present include; USACE, NWS, SWC, NDDOT and NDDEM. It was agreed that if lake reaches a level of 1452 feet, it would trigger design considerations for a new raise. Current protection is at 1454 feet.

On March 22, 2005, NDDEM coordinated an orientation exercise of the RAAD Action Plan Agencies involved included: NDDEM, NDDOT, USACE, NWS, BIA, SWC, local/tribal emergency managers from Benson and Ramsey Counties and Spirit Lake Tribe, local/tribal council chairs, and local/tribal functional and task coordinators assigned responsibility in the local emergency operations plans (EOPs).

7. ASSISTANCE NEEDED: State officials have asked the USACE for technical assistance, which is being provided.
8. OUTSIDE HELP ON SCENE: NDDOT, SWC, NDHP, BIA and NDDEM have conducted site inspections.
9. OTHER INFORMATION: The N.D. Division of Emergency Management's Situation Reports are posted on the Division's Internet home page. The address is <http://www.state.nd.us/dem>.

Douglas C. Friez, State Director